DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-022469
Date Inspected: 06-Apr-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name: Steve Jensen

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower

Summary of Items Observed:

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Tower Splice – 83 Meter elevation, South Tower leg: This QA Inspector randomly observed the status of the upper and lower Interior Corner Closure Splice Plates located at the B- C corner and C-D corner. During this shift the following was observed.

B-C corner, lower plate: This QA Inspector randomly observed ABF welding personnel Salvador Sandoval (#2202) using the Flux Cored Arc Welding (FCAW) process to increase the size of the tack welds at this location. This QA Inspector randomly observed QC Inspector Steve Jensen monitoring the welding. QC Inspector Steve Jensen stated the welding parameters were 255 amperes and 21 volts at a travel speed of 100 mm per minute which provided a heat input of 3.2 Kj per mm. The welding observed by this QA Inspector appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-F2200-3. Later this shift, QC Inspector Steve Jensen stated he had performed and accepted the fit up of the splice plate. This QA Inspector performed a random visual verification and the work appeared to comply with the contract requirements. This QA Inspector did not observe a gap greater than 2 mm. This QA Inspector randomly observed ABF welding personnel Rick Clayborn (#2773) was present this afternoon and setting up welding equipment.

B-C corner, upper plate: This QA Inspector randomly observed ABF welding personnel Salvador Sandoval

(#2202) using the carbon arc process to remove all the tack welds. This QA Inspector was present when ABF Engineer Mark McDonald stated the plate would be cut free, the bottom of the plate would be pulled out and the top pushed in to split the difference in the gaps at the top and the bottom in which case all gaps should be less than 5 mm. By the end of the shift this date This QA Inspector observed the tack welds had been removed and several fitting aids (dogs) had been attached to begin the fitting process.

D-C corner, lower plate: This QA Inspector observed an induction heat blanket was being placed over the lower section of the plate covering the plate from the bottom to the welding hold back splice area. ABF welding personnel Todd Jackson was randomly observed setting up the equipment including running thermocouple cables. Prior to the placement of the preheating equipment QC Inspector Steve Jensen stated he had performed and accepted the fit up of the splice plate. This QA Inspector performed a random visual verification and the work appeared to comply with the contract requirements. This QA Inspector did not observe a gap greater than 2 mm.

D-C corner, upper plate: QC Inspector Steve Jensen stated he had performed and accepted the fit up of the splice plate. This QA Inspector performed a random visual verification and the work appeared to comply with the contract requirements. This QA Inspector did not observe a gap greater than 2 mm.

Tower Splice – 83 Meter elevation, West Tower leg: This QA Inspector observed ABF personnel had placed the lower splice plate on top of the support brackets and attached 4 fitting aids (dogs). This QA Inspector observed the three remaining locations had been prepared by removing the paint by grinding.

Tower Splice – 83 Meter elevation, East Tower leg: This QA Inspector and Caltrans Engineer Saman Soheili randomly observed corner splice cover plate was not bolted at face C and the bolts in face D were only hand tight. It was also observed the corner splice cover plate at corner B-C was bolted and had an offset of approximately 5-6 mm.

Tower Base – 3 to 13 Meter elevation; This QA Inspector randomly observed ABF welding personnel Kenneth Chappell using the Shielded Metal Arc Welding (SMAW) process to fit and tack weld the various pates used as temporary attachments for the Electro Slag Welding (ESW) process. This QA Inspector randomly observed QC Inspector Pat Swain monitoring the work at this location.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted below there were no notable conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Hager,Craig Quality Assurance Inspector

WELDING INSPECTION REPORT

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Reviewed By: Levell,Bill QA Reviewer